FIG.1

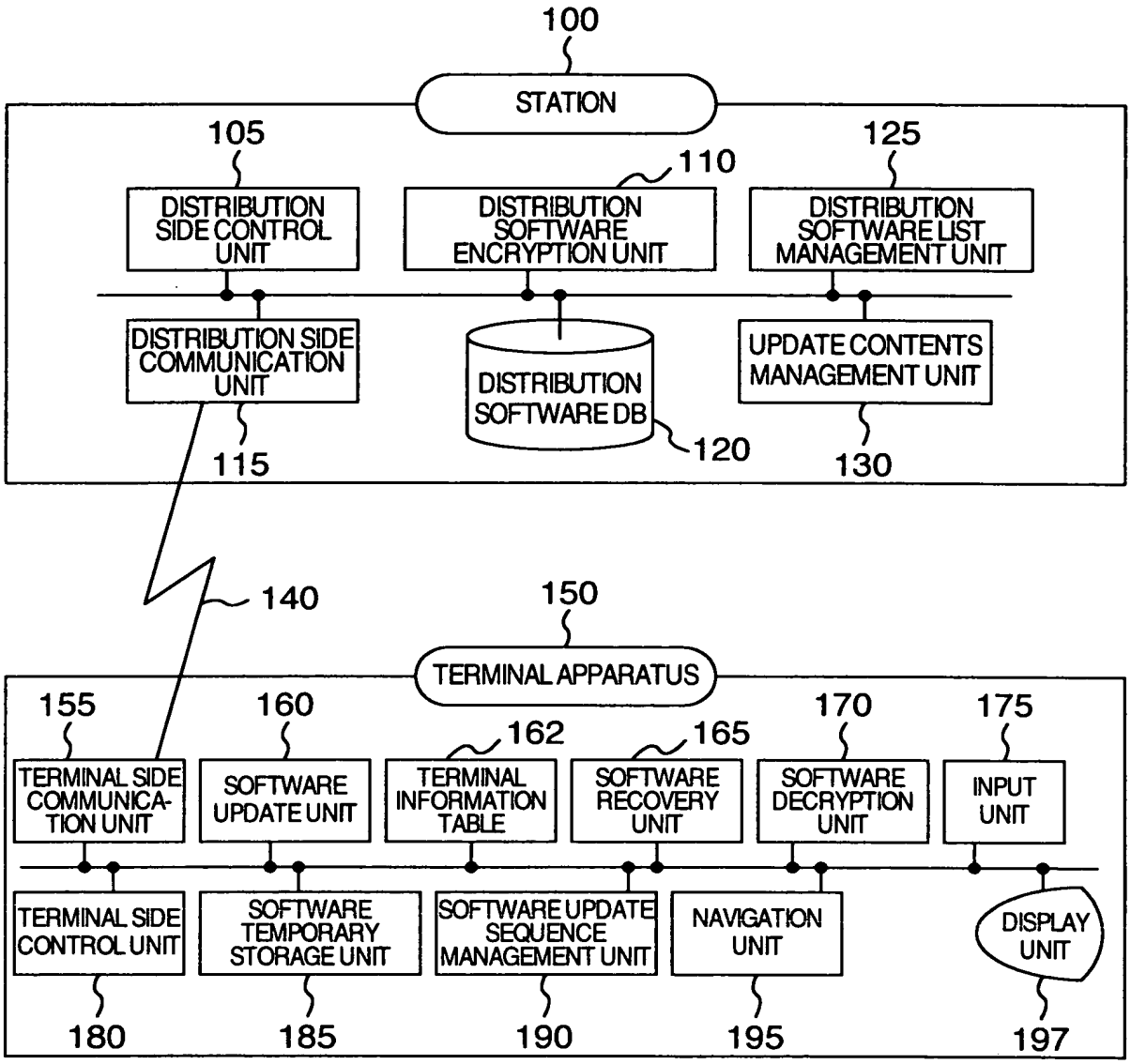

100
STATION
105
DISTRIBUTION SIDE CONTROL UNIT
110
DISTRIBUTION SOFTWARE ENCRYPTION UNIT
125
DISTRIBUTION SOFTWARE LIST MANAGEMENT UNIT
DISTRIBUTION SIDE COMMUNICATION UNIT
DISTRIBUTION SOFTWARE DB
UPDATE CONTENTS MANAGEMENT UNIT
115
120
130
140
150
TERMINAL APPARATUS
155
160
162
165
170
175
TERMINAL SIDE COMMUNICATION UNIT
SOFTWARE UPDATE UNIT
TERMINAL INFORMATION TABLE
SOFTWARE RECOVERY UNIT
SOFTWARE DECRYPTION UNIT
INPUT UNIT
TERMINAL SIDE CONTROL UNIT
SOFTWARE TEMPORARY STORAGE UNIT
SOFTWARE UPDATE SEQUENCE MANAGEMENT UNIT
NAVIGATION UNIT
DISPLAY UNIT
180
185
190
195
197

FIG.2

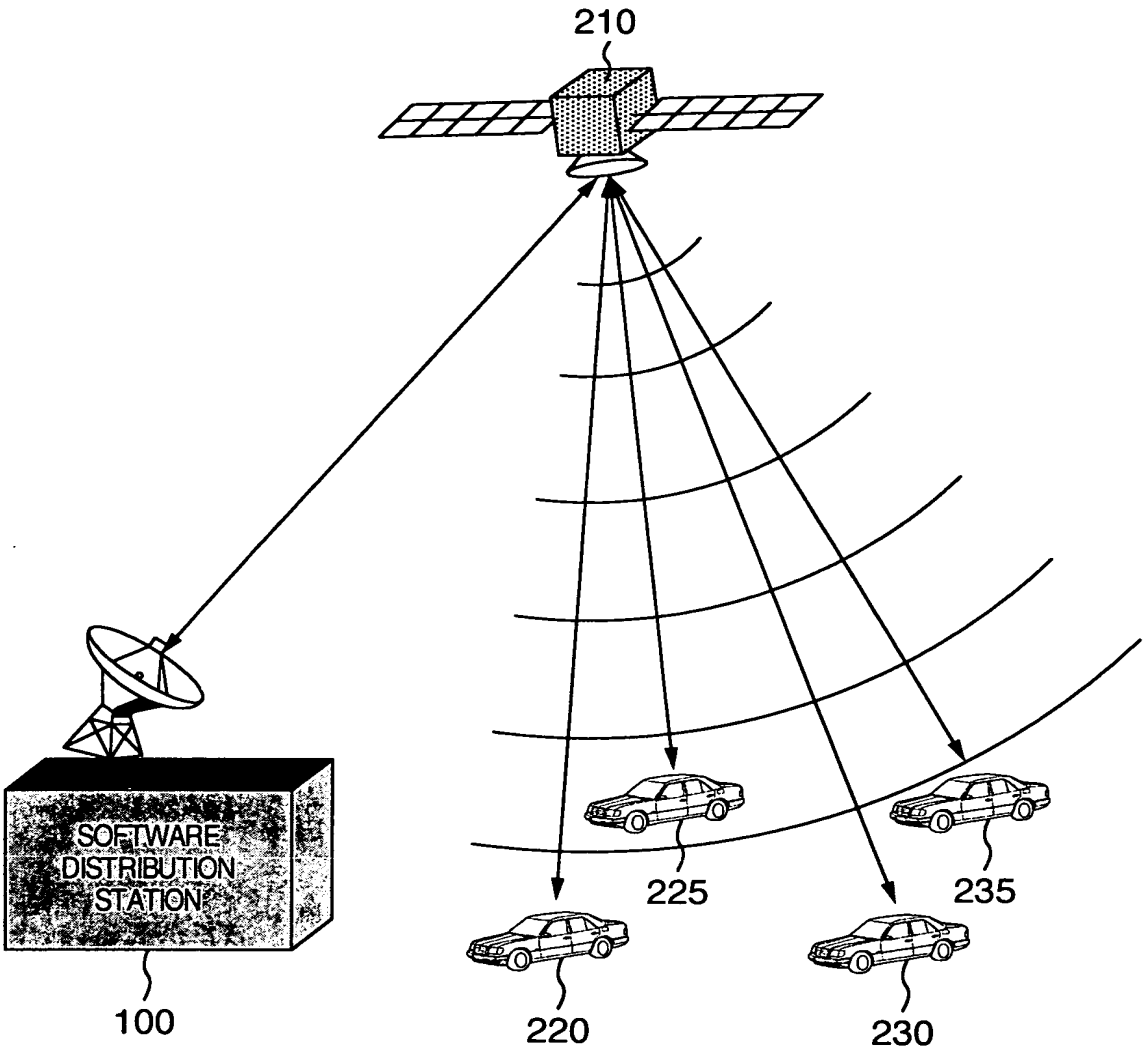


FIG.3

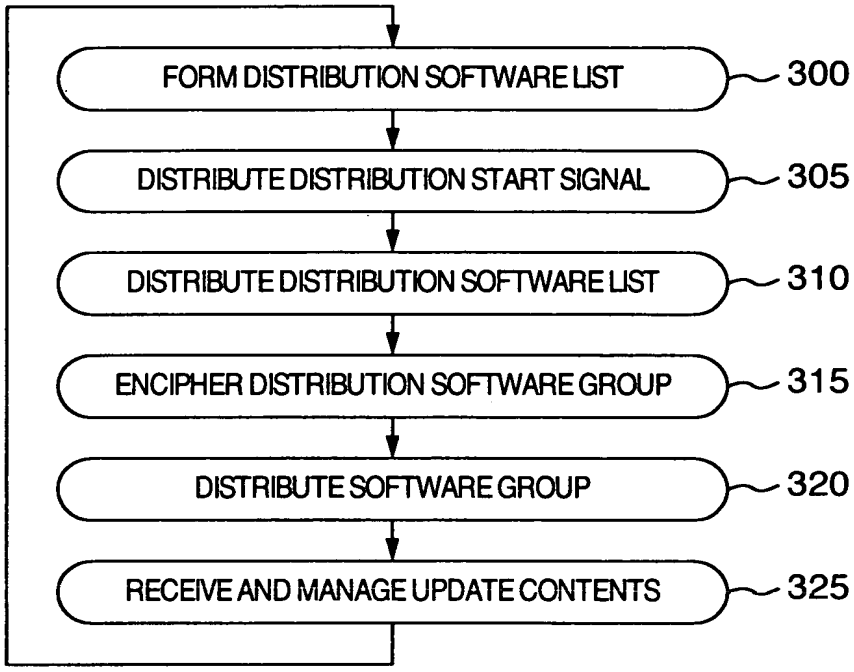

FORM DISTRIBUTION SOFTWARE LIST
300
DISTRIBUTE DISTRIBUTION START SIGNAL
305
DISTRIBUTE DISTRIBUTION SOFTWARE LIST
310
ENCIPHER DISTRIBUTION SOFTWARE GROUP
315
DISTRIBUTE SOFTWARE GROUP
320
RECEIVE AND MANAGE UPDATE CONTENTS
325

FIG.4

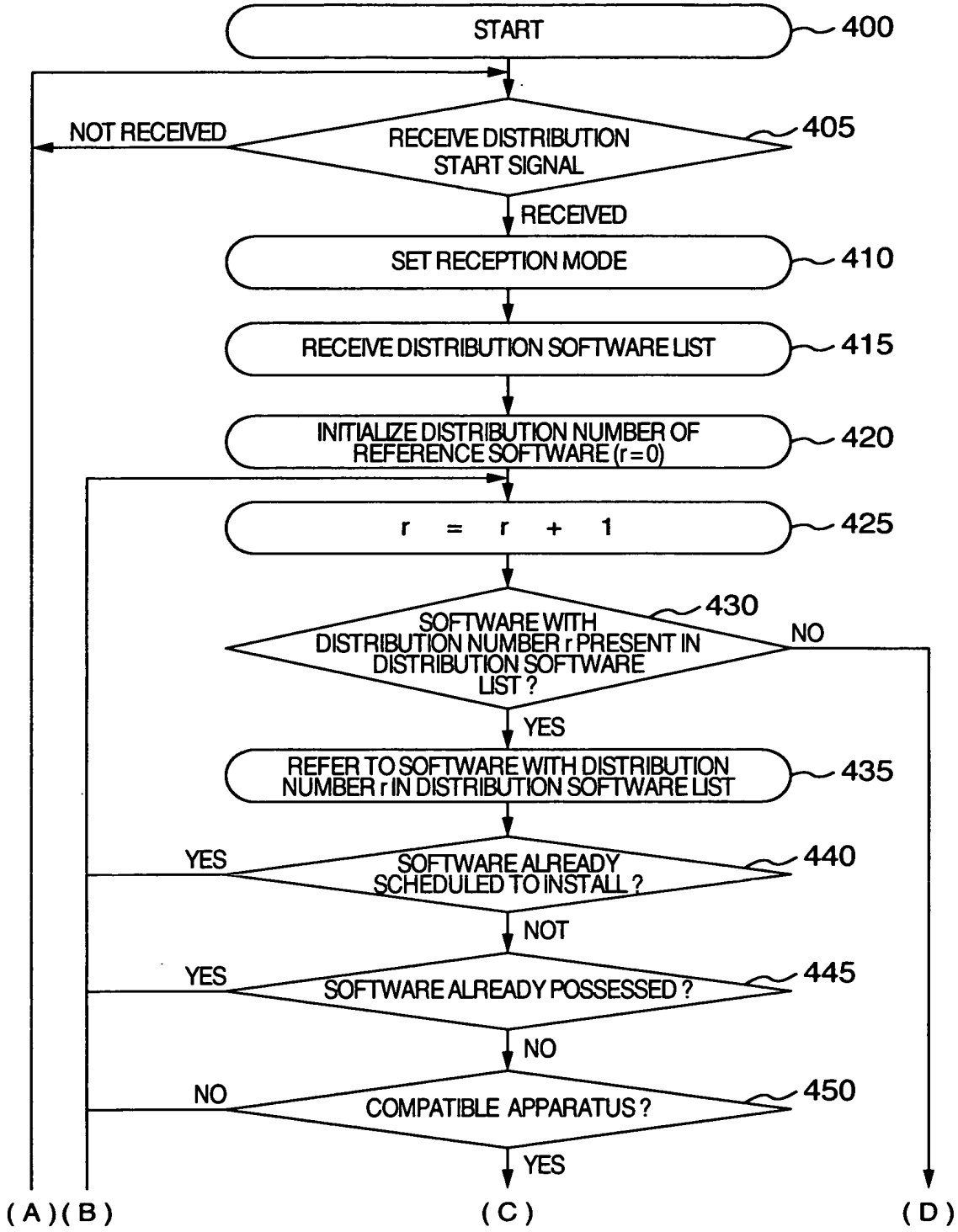

START
400
RECEIVE DISTRIBUTION START SIGNAL
405
NOT RECEIVED
RECEIVED
SET RECEPTION MODE
410
RECEIVE DISTRIBUTION SOFTWARE LIST
415
INITIALIZE DISTRIBUTION NUMBER OF REFERENCE SOFTWARE (r=0)
420
r = r + 1
425
SOFTWARE WITH DISTRIBUTION NUMBER r PRESENT IN DISTRIBUTION SOFTWARE LIST ?
430
NO
YES
REFER TO SOFTWARE WITH DISTRIBUTION NUMBER r IN DISTRIBUTION SOFTWARE LIST
435
YES
SOFTWARE ALREADY SCHEDULED TO INSTALL ?
440
NOT
YES
SOFTWARE ALREADY POSSESSED ?
445
NO
NO
COMPATIBLE APPARATUS ?
450
YES
(A)(B)
(C)
(D)

FIG.5

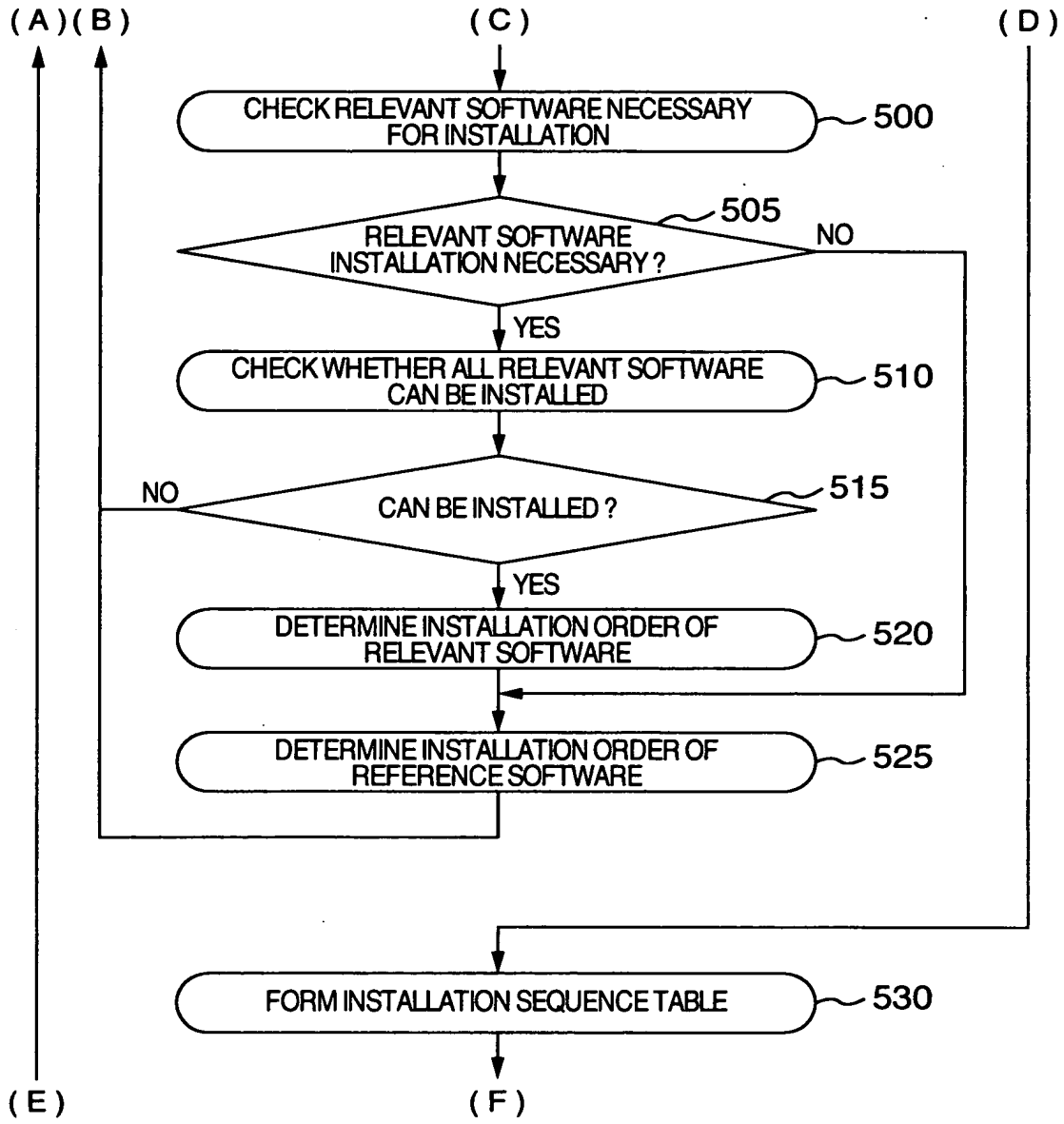

(A)(B)
(C)
(D)
CHECK RELEVANT SOFTWARE NECESSARY FOR INSTALLATION
500
RELEVANT SOFTWARE INSTALLATION NECESSARY ?
505
NO
YES
CHECK WHETHER ALL RELEVANT SOFTWARE CAN BE INSTALLED
510
NO
CAN BE INSTALLED ?
515
YES
DETERMINE INSTALLATION ORDER OF RELEVANT SOFTWARE
520
DETERMINE INSTALLATION ORDER OF REFERENCE SOFTWARE
525
FORM INSTALLATION SEQUENCE TABLE
530
(E)
(F)

FIG.6

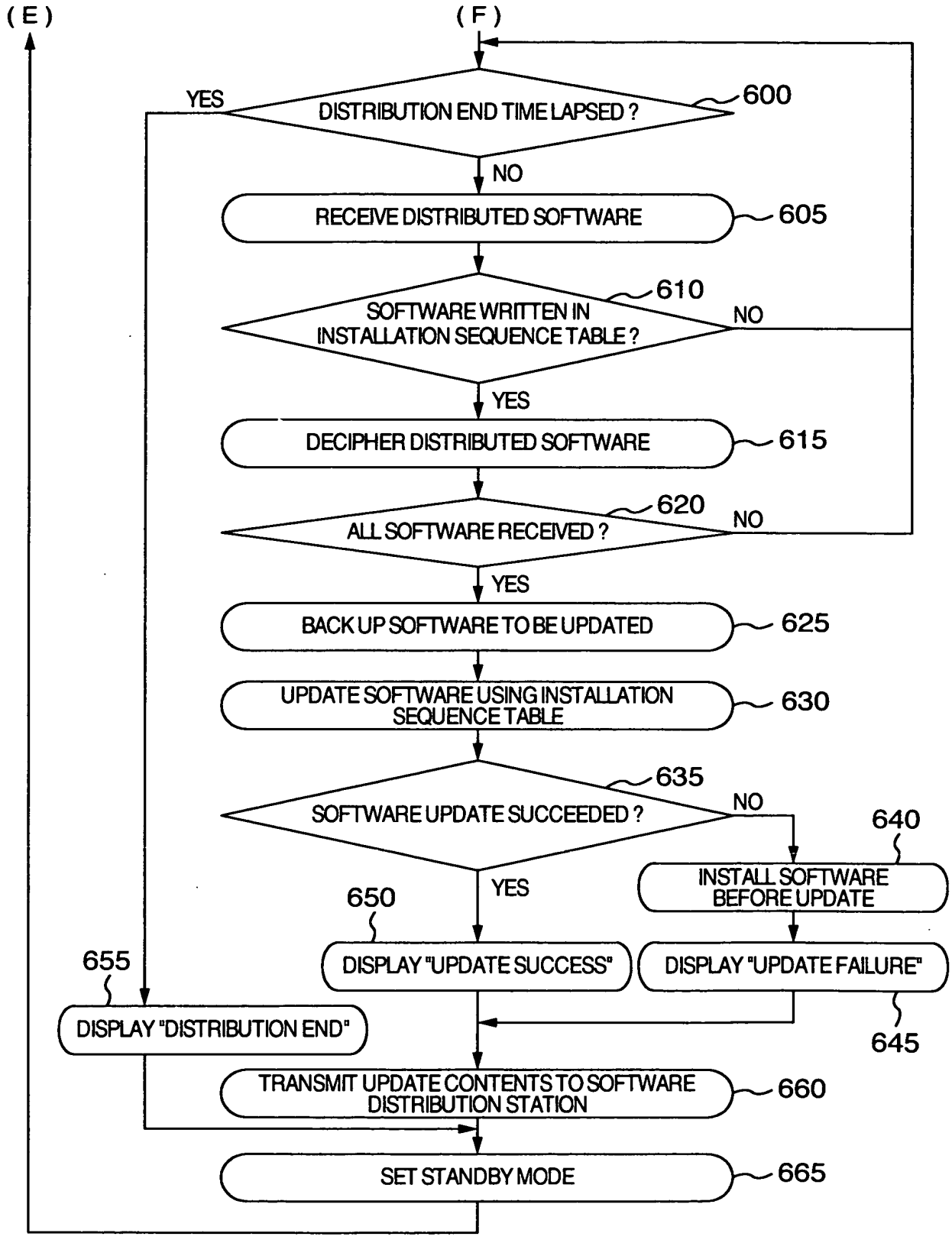

(E)
(F)
DISTRIBUTION END TIME LAPSED ?
600
YES
NO
RECEIVE DISTRIBUTED SOFTWARE
605
SOFTWARE WRITTEN IN INSTALLATION SEQUENCE TABLE ?
610
NO
YES
DECIPHER DISTRIBUTED SOFTWARE
615
ALL SOFTWARE RECEIVED ?
620
NO
YES
BACK UP SOFTWARE TO BE UPDATED
625
UPDATE SOFTWARE USING INSTALLATION SEQUENCE TABLE
630
SOFTWARE UPDATE SUCCEEDED ?
635
NO
YES
INSTALL SOFTWARE BEFORE UPDATE
640
DISPLAY "UPDATE SUCCESS"
650
DISPLAY "UPDATE FAILURE"
645
DISPLAY "DISTRIBUTION END"
655
TRANSMIT UPDATE CONTENTS TO SOFTWARE DISTRIBUTION STATION
660
SET STANDBY MODE
665

FIG.7

700

SOFTWARE DISTRIBUTION LIST

705	715	720	725	730	735	740
DISTRIBUTION TIME (NUMBER)	SOFTWARE NAME (DATA SIZE: KB)	INSTALLATION TYPE	SOFTWARE NAME/VER. BEFORE UPDATE	SOFTWARE NAME/VER. AFTER UPDATE	COMPATIBLE APPARATUS	COMPATIBLE SOFTWARE
10:10:00 (1)	INTERNET BROWSER VER.1.0(3240)	NEW	–	–	Navi3000 Navi2000	–
10:11:00 (2)	3D VIEWER PLUG-IN (1240)	NEW	–	–	Navi3000 Navi2000	NAVIGATOR, VER.2.0 OR HIGHER
10:12:00 (3)	VOICE GUIDE PLUG-IN (2210)	NEW	–	–	Navi3000 Navi2000	NAVIGATOR, VER.4.0 OR HIGHER
10:13:00 (4)	MAP DATA ('99 VERSION) (35200)	NEW	–	–	Navi3000 Navi2000	NAVIGATOR, VER.4.0 OR HIGHER
10:14:00 (5)	DRIVER UP-DATA VER.5.0(2170)	UPDATE	NAVI DRIVER VER.4.0	NAVI DRIVER VER.5.0	Navi3000	–
10:15:00 (6)	NAVIGATOR UP-DATA VER.5.0(1950)	UPDATE	NAVIGATOR VER.4.0	NAVIGATOR VER.5.0	Navi3000	NAVI DRIVER VER.5.0
10:16:00 (7)	DRIVER UP-DATA VER.4.0(1830)	UPDATE	NAVI DRIVER VER.3.0	NAVI DRIVER VER.4.0	Navi3000 Navi2000	–
10:17:00 (8)	NAVIGATOR UP-DATA VER.4.0(1760)	UPDATE	NAVIGATOR VER.3.0	NAVIGATOR VER.4.0	Navi3000 Navi2000	NAVI DRIVER VER.4.0
10:18:00 (9)	DRIVER UP-DATA VER.3.0(1320)	UPDATE	NAVI DRIVER VER.2.0	NAVI DRIVER VER.3.0	Navi3000 Navi2000	–
10:19:00 (10)	NAVIGATOR UP-DATA VER.3.0(1570)	UPDATE	NAVIGATOR VER.2.0	NAVIGATOR VER.3.0	Navi3000 Navi2000	NAVI DRIVER VER.3.0
10:20:00 (11)	DRIVER UP-DATA VER.2.0(1680)	UPDATE	NAVI DRIVER VER.1.0	NAVI DRIVER VER.2.0	Navi3000 Navi2000	–
10:21:00 (12)	NAVIGATOR UP-DATA VER.2.0(1870)	UPDATE	NAVIGATOR VER.1.0	NAVIGATOR VER.2.0	Navi3000 Navi2000	NAVI DRIVER VER.2.0

FIG.8

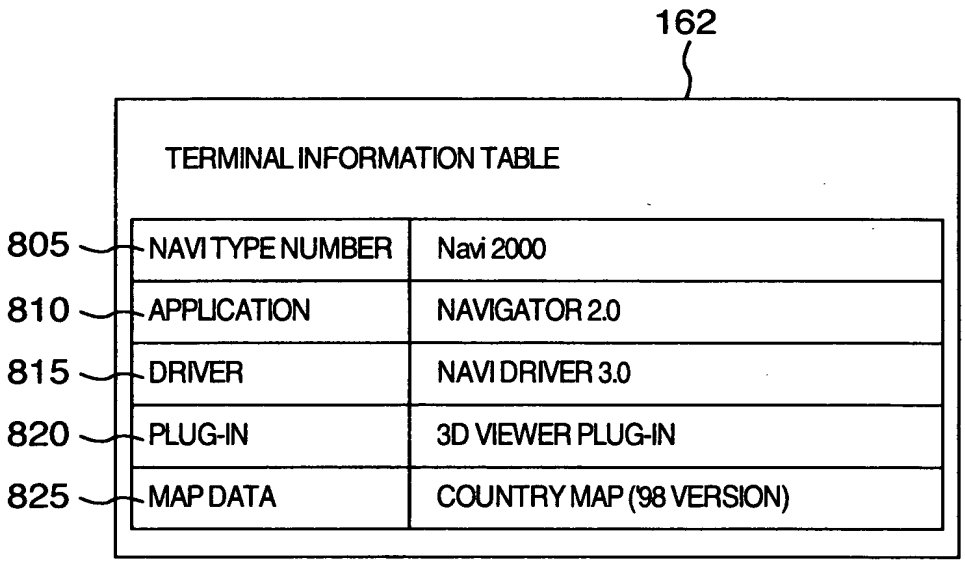

162
TERMINAL INFORMATION TABLE
805
NAVI TYPE NUMBER
Navi 2000
810
APPLICATION
NAVIGATOR 2.0
815
DRIVER
NAVI DRIVER 3.0
820
PLUG-IN
3D VIEWER PLUG-IN
825
MAP DATA
COUNTRY MAP ('98 VERSION)

FIG.9

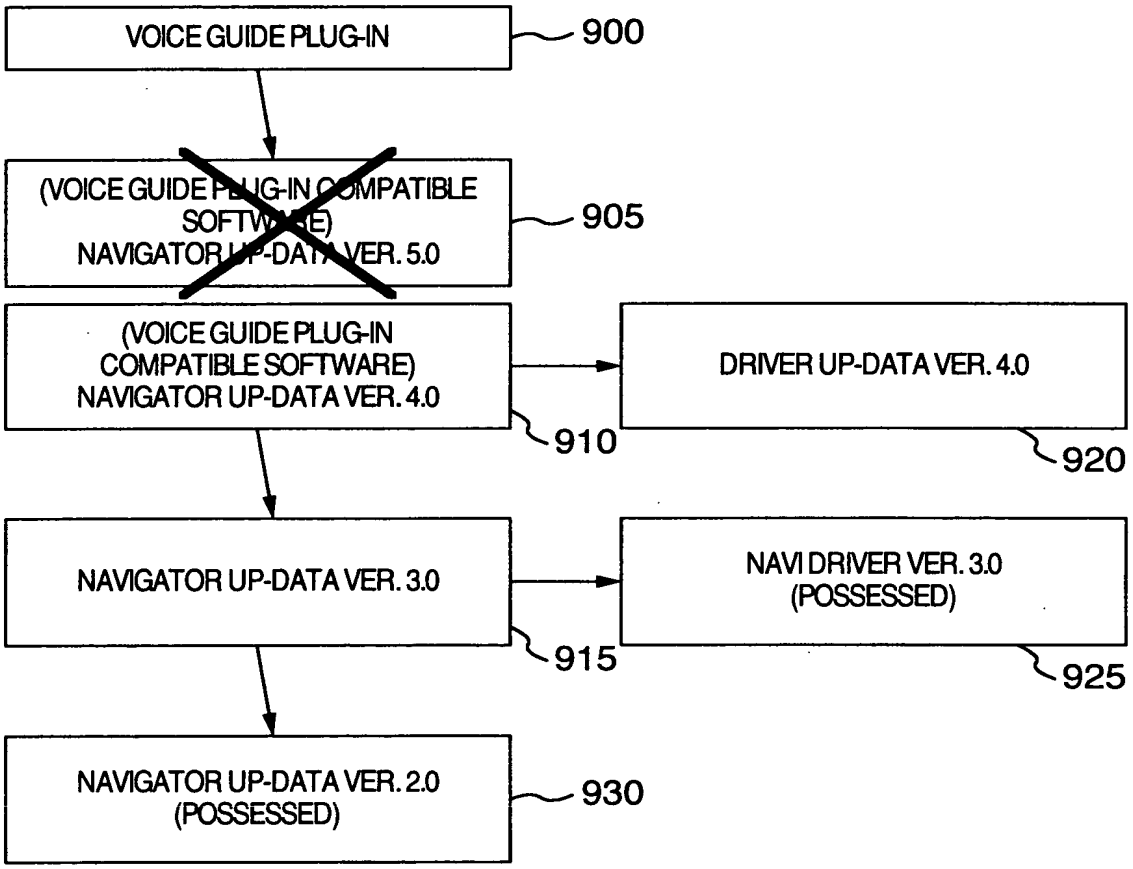

VOICE GUIDE PLUG-IN
900
(VOICE GUIDE PLUG-IN COMPATIBLE SOFTWARE)
NAVIGATOR UP-DATA VER. 5.0
905
(VOICE GUIDE PLUG-IN COMPATIBLE SOFTWARE)
NAVIGATOR UP-DATA VER. 4.0
910
DRIVER UP-DATA VER. 4.0
920
NAVIGATOR UP-DATA VER. 3.0
915
NAVI DRIVER VER. 3.0
(POSSESSED)
925
NAVIGATOR UP-DATA VER. 2.0
(POSSESSED)
930

FIG.10

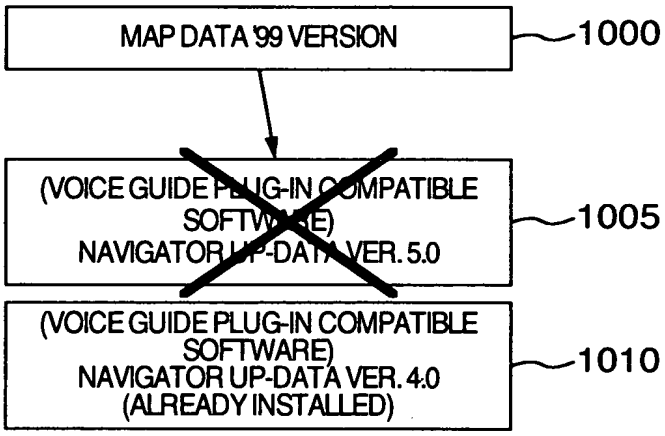

MAP DATA '99 VERSION
1000
(VOICE GUIDE PLUG-IN COMPATIBLE SOFTWARE)
NAVIGATOR UP-DATA VER. 5.0
1005
(VOICE GUIDE PLUG-IN COMPATIBLE SOFTWARE)
NAVIGATOR UP-DATA VER. 4.0
(ALREADY INSTALLED)
1010

FIG.11

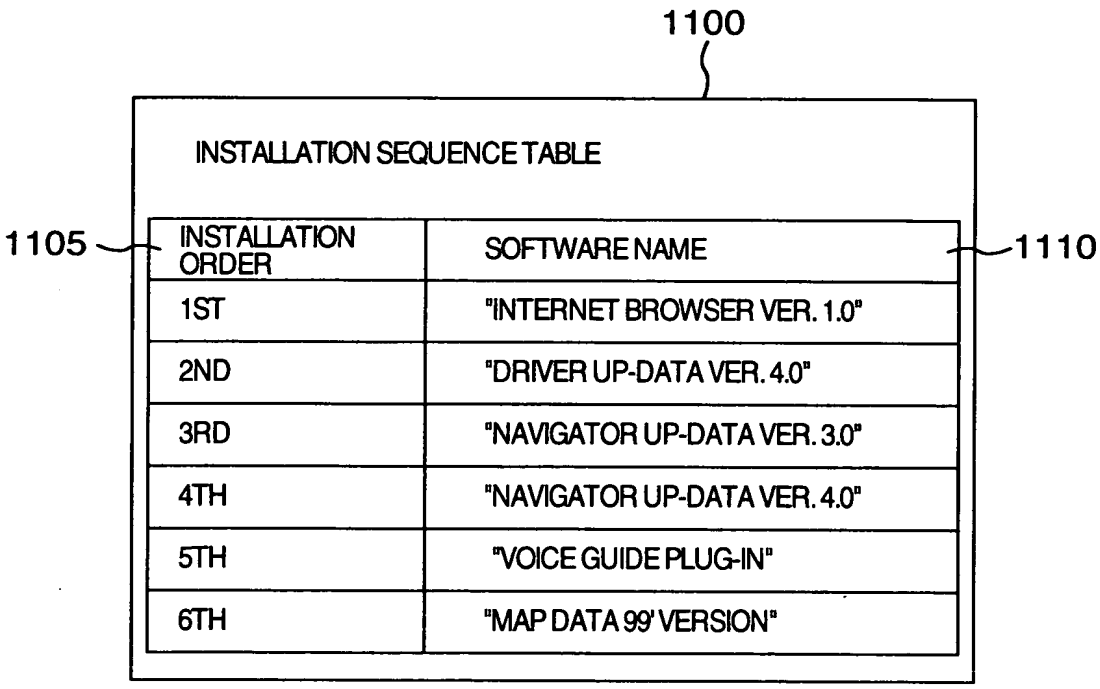

1100
INSTALLATION SEQUENCE TABLE
1105
1110
INSTALLATION ORDER
SOFTWARE NAME
1ST
"INTERNET BROWSER VER. 1.0"
2ND
"DRIVER UP-DATA VER. 4.0"
3RD
"NAVIGATOR UP-DATA VER. 3.0"
4TH
"NAVIGATOR UP-DATA VER. 4.0"
5TH
"VOICE GUIDE PLUG-IN"
6TH
"MAP DATA 99' VERSION"

FIG.12

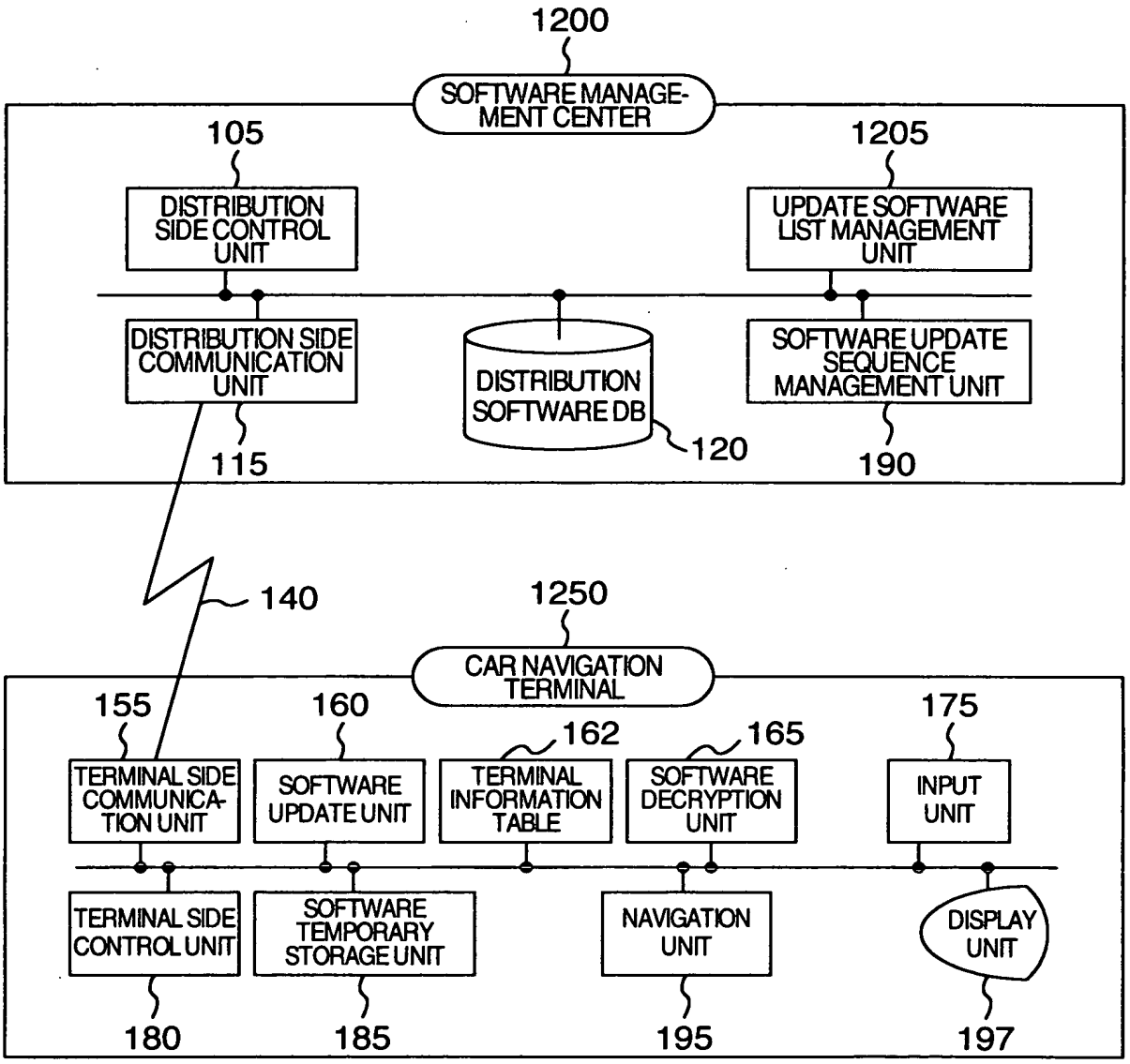

1200
SOFTWARE MANAGE-MENT CENTER
105
DISTRIBUTION SIDE CONTROL UNIT
1205
UPDATE SOFTWARE LIST MANAGEMENT UNIT
DISTRIBUTION SIDE COMMUNICATION UNIT
DISTRIBUTION SOFTWARE DB
SOFTWARE UPDATE SEQUENCE MANAGEMENT UNIT
115
120
190
140
1250
CAR NAVIGATION TERMINAL
155
160
162
165
175
TERMINAL SIDE COMMUNICA-TION UNIT
SOFTWARE UPDATE UNIT
TERMINAL INFORMATION TABLE
SOFTWARE DECRYPTION UNIT
INPUT UNIT
TERMINAL SIDE CONTROL UNIT
SOFTWARE TEMPORARY STORAGE UNIT
NAVIGATION UNIT
DISPLAY UNIT
180
185
195
197

FIG.13

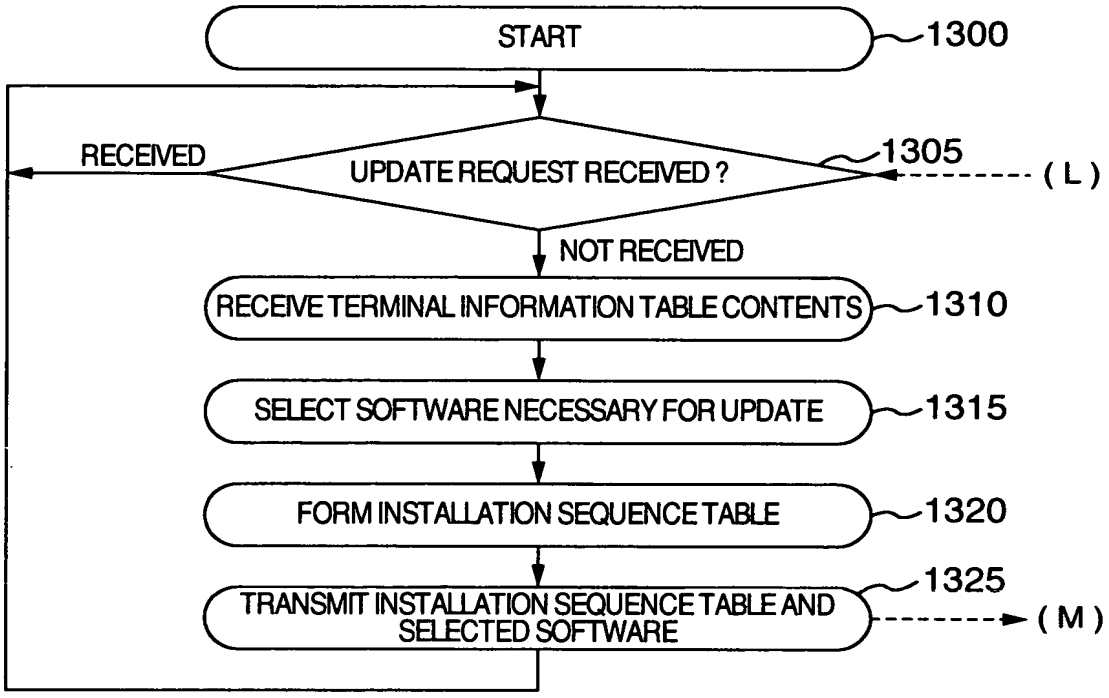

START
1300
UPDATE REQUEST RECEIVED ?
1305
RECEIVED
(L)
NOT RECEIVED
RECEIVE TERMINAL INFORMATION TABLE CONTENTS
1310
SELECT SOFTWARE NECESSARY FOR UPDATE
1315
FORM INSTALLATION SEQUENCE TABLE
1320
TRANSMIT INSTALLATION SEQUENCE TABLE AND SELECTED SOFTWARE
1325
(M)

FIG.14

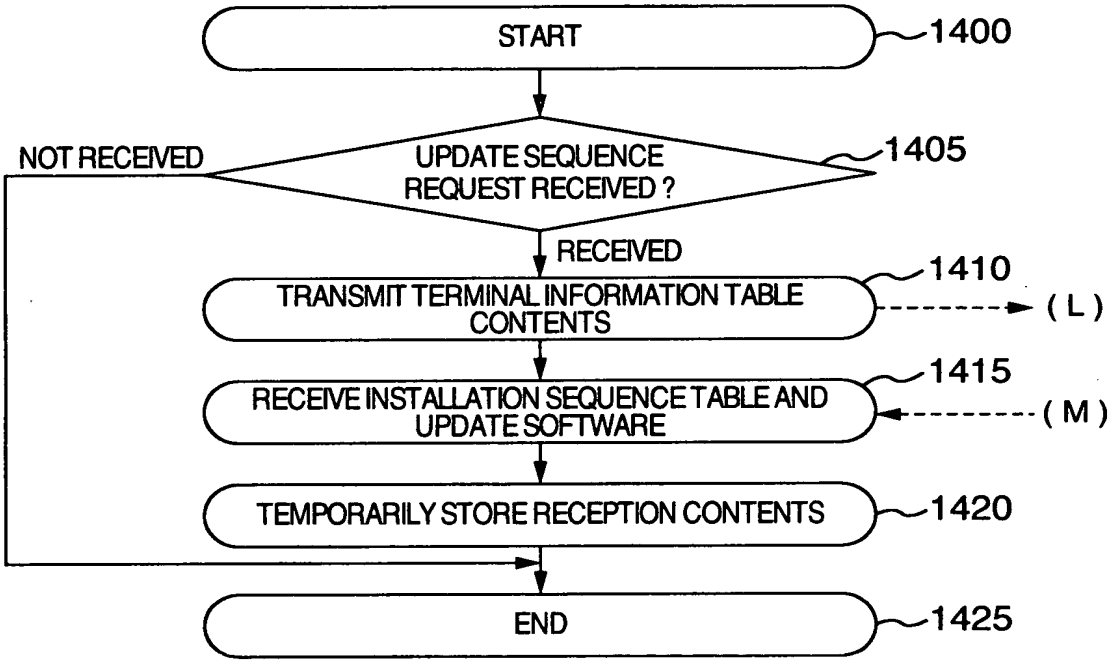

START
1400
UPDATE SEQUENCE REQUEST RECEIVED ?
1405
NOT RECEIVED
RECEIVED
TRANSMIT TERMINAL INFORMATION TABLE CONTENTS
1410
(L)
RECEIVE INSTALLATION SEQUENCE TABLE AND UPDATE SOFTWARE
1415
(M)
TEMPORARILY STORE RECEPTION CONTENTS
1420
END
1425

FIG.15

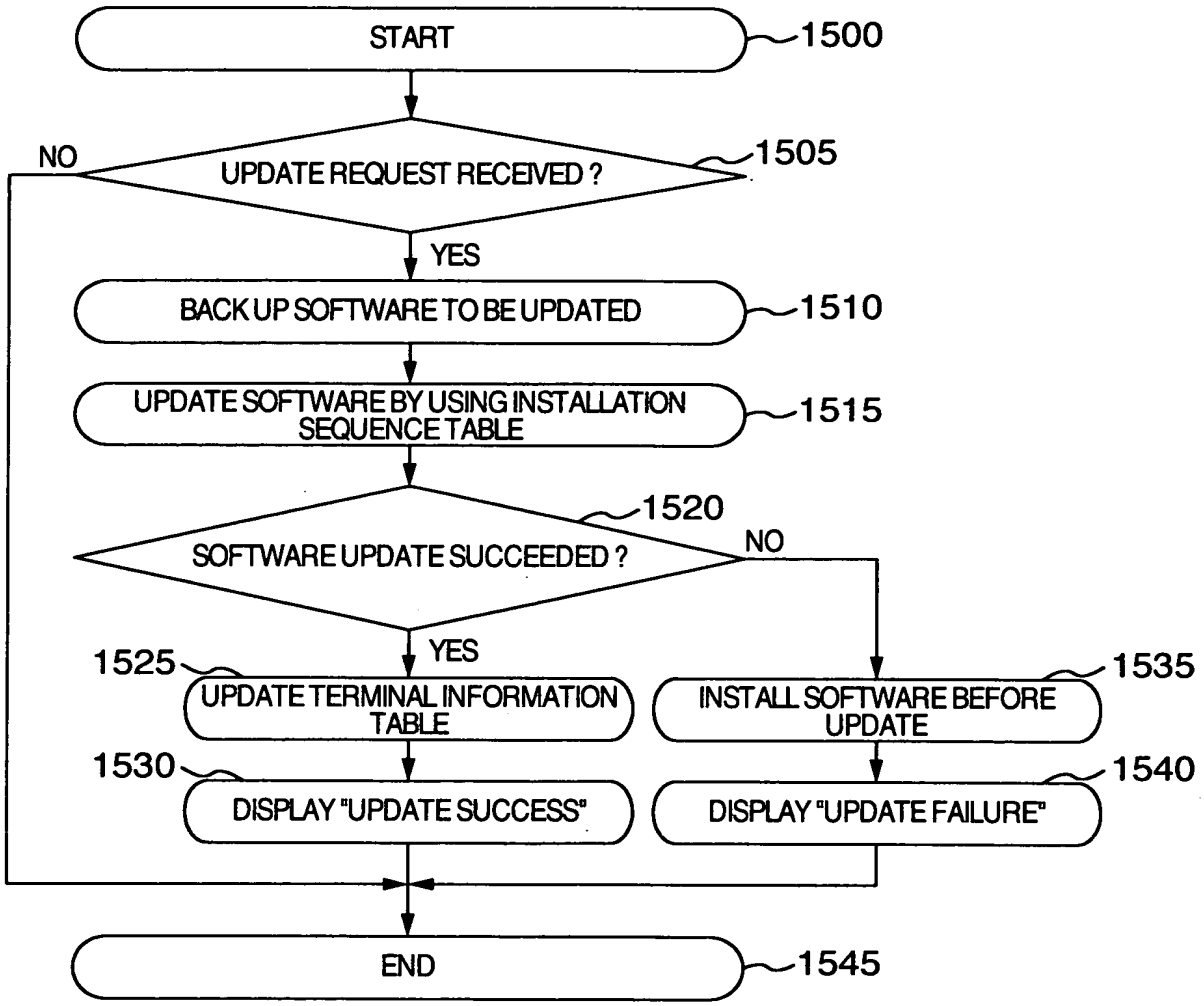

START
1500
NO
UPDATE REQUEST RECEIVED ?
1505
YES
BACK UP SOFTWARE TO BE UPDATED
1510
UPDATE SOFTWARE BY USING INSTALLATION SEQUENCE TABLE
1515
1520
SOFTWARE UPDATE SUCCEEDED ?
NO
YES
1525
UPDATE TERMINAL INFORMATION TABLE
1530
DISPLAY "UPDATE SUCCESS"
INSTALL SOFTWARE BEFORE UPDATE
1535
DISPLAY "UPDATE FAILURE"
1540
END
1545

FIG.16

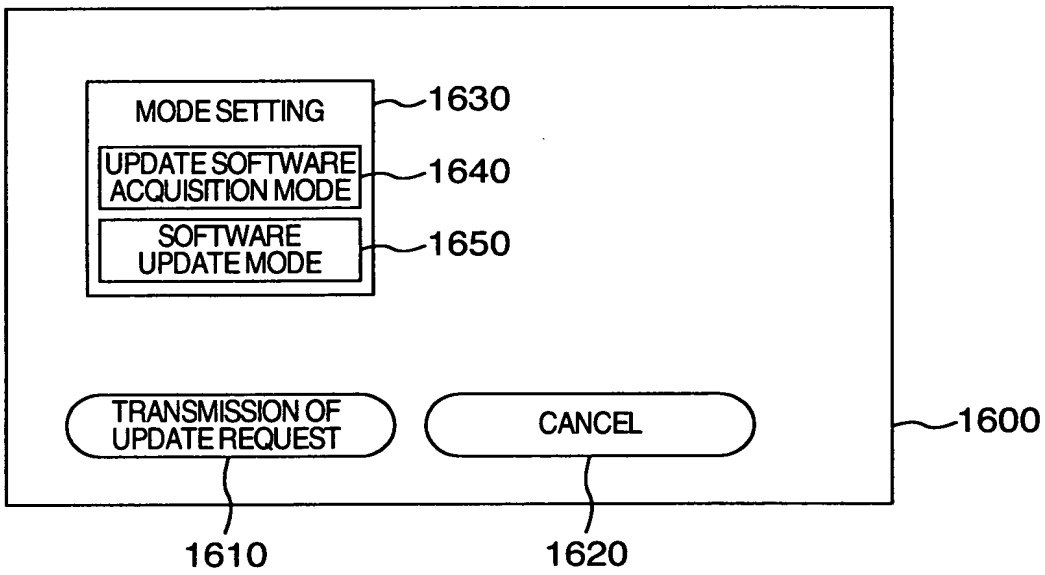

MODE SETTING
1630
UPDATE SOFTWARE ACQUISITION MODE
1640
SOFTWARE UPDATE MODE
1650
TRANSMISSION OF UPDATE REQUEST
CANCEL
1600
1610
1620

FIG.17

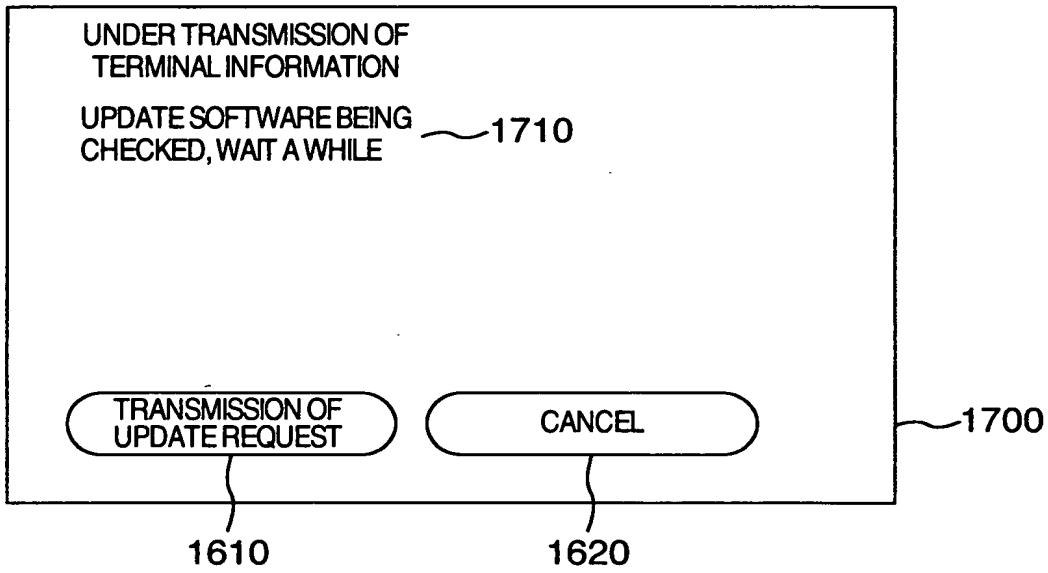

UNDER TRANSMISSION OF TERMINAL INFORMATION
UPDATE SOFTWARE BEING CHECKED, WAIT A WHILE
1710
TRANSMISSION OF UPDATE REQUEST
CANCEL
1700
1610
1620

FIG.18

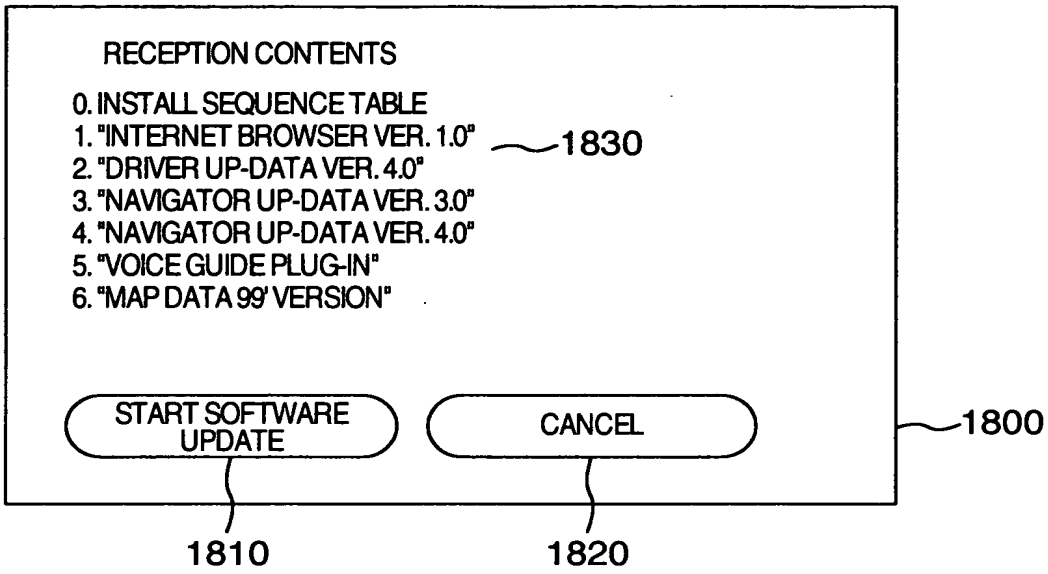
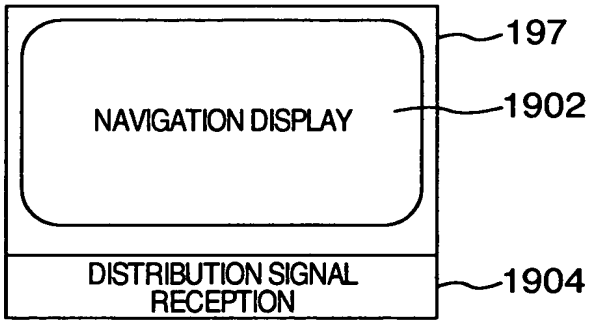

RECEPTION CONTENTS
0. INSTALL SEQUENCE TABLE
1. "INTERNET BROWSER VER. 1.0"
2. "DRIVER UP-DATA VER. 4.0"
3. "NAVIGATOR UP-DATA VER. 3.0"
4. "NAVIGATOR UP-DATA VER. 4.0"
5. "VOICE GUIDE PLUG-IN"
6. "MAP DATA 99' VERSION"
1830
START SOFTWARE UPDATE
CANCEL
1800
1810
1820

FIG.19


197
NAVIGATION DISPLAY
1902
DISTRIBUTION SIGNAL RECEPTION
1904

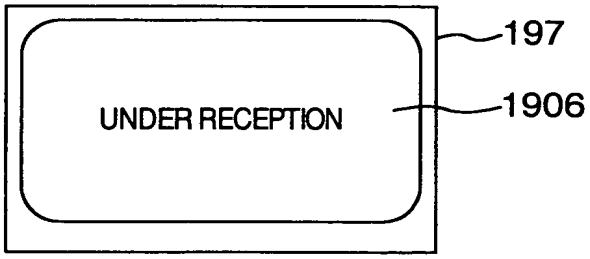



FIG.20